INCLUDING, BUT NOT LIMITED TO ANY CITY STANDARD SPECIFICATIONS AND SUPPLEMENTS. 3. ALL DEBRIS SPILLED ON THE STREETS OR ADJACENT PROPERTY SHALL BE PROMPTLY REMOVED BY THE

CONTRACTOR BY THE END OF THE DAY OR PRIOR TO A RAIN EVENT 4. ALL CONSTRUCTION PROCEDURES AND MATERIALS TO MEET OR EXCEED MINIMUM REQUIREMENTS OF THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.

5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS DATED 2007 AND THE CITY OF GRIMES SUPPLEMENTAL SPECIFICATIONS.

6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY AND ALL APPROPRIATE SAFETY

7. THE CONTRACTOR SHALL FURNISH, PLACE AND REMOVE ALL NECESSARY SIGNS AND BARRICADES DURING CONSTRUCTION IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE CITY AND ITS INSPECTION STAFF PROPER NOTICE

FOR THEIR REQUIRED INSPECTIONS. 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL REQUIRED PERMITS FOR PERFORMING

10. WORK SHALL INCLUDE CONNECTION TO EXISTING PUBLIC UTILITIES AND ANY AND ALL FITTINGS, CLEANOUTS AND APPURTENANCES REQUIRED BY CODES 11. THE CONTRACTOR IS RESPONSIBLE FOR CLEARING & GRUBBING THE SITE, AND REMOVAL & DISPOSAL OF ANY

DELETERIOUS AND EXCESS MATERIALS FROM THE SITE. 12. THE CONTRACTOR SHALL PLACE SILT FENCE AROUND ALL STORM SEWER INLET LOCATIONS, STEEP SLOPES, OR

AS DIRECTED BY THE CITY. 13. ANY DAMAGE DONE TO THE EXISTING FENCES, YARDS OR OTHER STRUCTURES OUTSIDE THE CONSTRUCTION LIMITS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

14. THE CONTRACTOR SHALL NOTIFY THE CITY AND THE ENGINEER 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

15. THE CONTRACTOR IS TO IDENTIFY AND COORDINATE REMOVAL AND/OR TRIMMING OF TREES ALONG THE PROJECT BOUNDARY WITH CITY STAFF. THE CONTRACTOR SHOULD ALSO IDENTIFY NOTIFICATION AND COORDINATION OF ANY FENCE REMOVALS WITH THE CITY AND AFFECTED LANDOWNERS.

16. ANY DAMAGE DONE TO THE EXISTING FENCES, YARDS OR OTHER STRUCTURES OUTSIDE THE CONSTRUCTION LIMITS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. 17. THE INSTALLATION OF A TRAIL, IF SHOWN ON THE PLANS, IS REQUIRED THROUGH THE ADJOINING OPEN SPACE, PRIVATE, AND CITY PROPERTY WHERE IDENTIFIED OR DELINEATED ON THE PLANS. SIDEWALK SHALL SIMILARLY

BE INSTALLED ADJACENT TO PROPOSED OUTLOTS.

18. THE CONTRACTOR TO PROVIDE SUBMITTALS OF CONSTRUCTION MATERIALS PRIOR TO CONSTRUCTION. 19. ALL SANITARY AND STORM SEWERS SHALL BE CLEANED AND TELEVISED.

20. ALL CONSTRUCTION STAKING TO BE DONE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR

21. THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO GRADING, EROSION, AND ASSOCIATED WORK FOR THE PROJECT. THE CONTRACTOR SHALL ESPECIALLY OBSERVE THE REQUIREMENTS OF THE SPECIFICATIONS (ALONG WITH THE EROSION CONTROL PLAN PREPARED FOR THE PROJECT) IN CONDUCTING GRADING AND SURFACE RESTORATION WORK.

21.A. THE POLLUTION PREVENTION PLAN IS THE RESPONSIBILITY OF THE OWNER WHOM SHALL MAKE ALL CONSTRUCTION WORKERS AWARE OF THE MAJOR PROVISIONS OF SAID PLAN.

21.B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH SIGNIFICANT STORM, TO LOCATE DAMAGE AND CONDUCT MAINTENANCE OPERATIONS

21.C. EXCEPT AS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED ON ALL DISTURBED AREAS NO LATER THAN THE 14TH DAY AFTER NO CONSTRUCTION ACTIVITY HAS OCCURRED ON AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR A PERIOD OF ANOTHER 21 CALENDAR DAYS.

22. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING WITH THE CITY ENGINEER AND AQUILA. 23. ALL IDNR AND IDOT PERMITS SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL HAVE PAPER COPY ON SITE BEFORE COMMENCING CONSTRUCTION.

24. MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18-INCHES AND A MINIMUM HORIZONTAL SEPARATION OF 10

FEET BETWEEN SANITARY SEWERS AND WATER MAINS. 25. MAINTAIN A MINIMUM VERTICAL SEPARATION OF 12-INCHES BETWEEN STORM SEWER AND WATER MAIN (IF WATER MAIN=CONTINUOUS LENGTH OF DIP) AND 24-INCHES MINIMUM IF WATER MAIN=PLASTIC PIPE.

26. SIDEWALK THICKNESS TO BE 6-INCHES ABOVE UTILITY TRENCHES.

27. ALL UTILITY STATIONS IN PLAN VIEW ARE TIED TO CENTERLINE STREET STATIONS. ALL UTILITY LENGTHS DENOTED IN PROFILE VIEW REFLECT MATERIAL QUANTITIES NECESSARY FOR CONSTRUCTION. 28. FULL DEPTH COMPACTION REQUIRED AT ALL STREET CROSSINGS. NOTE THAT DENSITY TEST REPORTS FROM

TESTING LAB WILL BE BY DEVELOPER. 29. THE DEVELOPER SHALL PROVIDE TO THE CITY THE MEASUREMENTS OF ALL SANITARY SEWER, WATER, AND FOOTING DRAIN SERVICES FROM LOT CORNERS. LOT UTILITY FORMS SHALL BE SUBMITTED TO DOCUMENT

30. VEGETATIVE STREAM BED STABILIZATION. GRADED SURFACES IN THE CITY OF GRIMES GREENBELT SHALL BE SEEDED WITH 86 LBS. PER ACRE OF THE EROSION CONTROL MIXTURE DESIGNATED IN THE STORM WATER MANAGEMENT AND EROSION CONTROL PLAN, TO WHICH SHALL BE ADDED 50 LBS. PER ACRE OF BROOME GRASS. SEED BED PREPARATION WITH FERTILIZER, SURFACE PREPARATION, AND MULCHING SHALL BE DONE IN

ACCORDANCE WITH THE STORM WATER PLAN. 31. ALL UTILITY CONTRACTORS AND/OR OWNERS SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF GRIMES WITH "AS-BUILT" DRAWINGS OF ALL IMPROVEMENTS.

32. THE CITY OF GRIMES MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK. CALL BLACK HILLS (JOHN FELTNER 515-986-3188) & FOX ENGINEERING (JOHN GADE 515-233-0000). 33. ALL WORK INVOLVING THE SANITARY SEWER AND WATER DEPARTMENTS SHALL BE SCHEDULED THROUGH CITY

HALL (515-986-3036). 34. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM

SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC. 35. ALL RIP-RAP SHALL BE UNDERLAIN WITH ENGINEERING FABRIC AS SPECIFIED IN THE URBAN SPECIFICATIONS. 36. TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN AND STORM SEWER SERVICES. A GROUNDING ROD SHALL

BE PLACED AS PER THE URBAN SPECIFICATIONS. 37. ALL SERVICES SHOULD BE MARKED WITH A PAINTED STEEL POST. (WATER-BLUE, STORM-WHITE,

SANITARY-GREEN). POSTS SHOULD BE A 6-FOOT POST WITH FOUR FEET EXPOSED ABOVE GROUND. 38. ALL SERVICE LOCATIONS ARE TO BE STAMPED INTO THE CURB (TOP & FACE) AND INTO THE GUTTER WITH

LETTER IRONS AS PER THE CITY OF GRIMES SPECIFICATIONS. 39. ANY FIELD TILE DISCOVERED OR DAMAGED DURING CONSTRUCTION SHALL BE TIED INTO THE STORM SEWER SYSTEM OR REPAIRED/REPLACED.

40. R.C.P. STORM SEWER TO BE 2000D (OR BETTER).

41. ALL PLASTIC STORM SEWER PIPE SHALL INCLUDE TRACER WIRE PER CITY REQUIREMENTS.

42. ALL WORK INVOLVING THE SANITARY SEWER AND WATER DEPARTMENT SHALL BE SCHEDULED THROUGH PEOPLESERVICE (515-202-6355).

WATER MAINS

1. THE CONTRACTOR SHALL ARRANGE AND PAY FOR THE REQUIRED TAPS TO THE PUBLIC WATER MAIN.

2. WATERMAIN SHALL HAVE A MINIMUM OF 5.5 FEET COVER.

3. THE CONTRACTOR SHALL VERIFY BEFORE PLACING F.H.'S THAT NO PART OF THE F.H. SHALL BE CLOSER THAN 24" TO A PROPOSED SIDEWALK. F.H.'S SHALL ALSO BE PLACED ON THE EXTENSION OF LOT LINES AS SHOWN ON THE PLANS. ADDITIONAL STAKES FOR LOT CORNERS AND SIDEWALKS SHALL BE SET.

4. ALL FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL-WATEROUS PACER WB-67-250, MUELLER SUPER CENTURION 250 (3-WAY A-423), OR CLOW MEDALLION F-2545. ALL HYDRANTS SHALL HAVE THE FOLLOWING: 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, 5-1/2' BURY, AND FACTORY PAINTED RED. THE MINIMUM HYDRANT LEAD SHALL BE 3-FEET.

5. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED. PROPOSED WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF GRIMES. THE BACTERIA AND BLOWOFF OF CHLORINE SHALL BE DONE BY THE CITY OF GRIMES. IF THE TEST DOES NOT PASS, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL THE WATER USED TO REPEAT THE TEST. THE WATER COST WILL BE AT NORMAL CITY OF GRIMES WATER RATES.

ALL PLASTIC WATER MAIN PIPE SHALL INCLUDE TRACER WIRE PER CITY REQUIREMENTS. 8. MECHANICALLY RESTRAIN ALL JOINTS WITHIN 50 FEET OF VALVES, DEAD ENDS, TEES OR BENDS

CONSTRUCTION PLANS

BRIDGE CRAFA

CITY OF GRIMES POLK COUNTY, IOWA

PRIMAND DEVELOPMENT

FOR

PREPARED BY:

Engineering Resource Group, Inc. Engineers and Surveyors 2413 GRAND AVENUE DES MOINES, IOWA 50312 (515) 288-4823

INDEX OF SHEETS

COVER PROJECT MAP GRADING PLAN NE BRIDGE CREEK CROSSING - SANITARY & WATER N PARK DRIVE - SANITARY & WATER NE BRIDGE CREEK CROSSING - PAVEMENT & STORM N PARK DRIVE - PAVEMENT & STORM STORM WATER MANAGMENT FACILITY DETAIL SHEET DETAIL SHEET SIGNAGE PLAN SWPPP EROSION CONTROL

SANITARY SEWERS

I. THE SANITARY SEWER PIPE BEDDING SHALL BE GRANULAR ENCASEMENT

VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATERMAIN AND STORM SEWER SHALL BE 1.50 FEET MINIMUM. HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATERMAINS SHALL BE 10 FEET MINIMUM. 3. ALL SANITARY SEWER MANHOLES CASTINGS SHALL BE SEALED WITH INTERIOR CHIMNEY SEALS. THE MAXIMUM NUMBER OF SPACER RINGS SHALL NOT EXCEED 12-INCHES AND

SITE PLAN

SHALL INCLUDE SPACER RING(S) EQUAL TO AT LEAST 4-INCHES. 4. IF NOT NOTED BY MORE STRINGENT REQUIREMENTS, ALL MANHOLES THAT FALL OUTSIDE THE PHASING LIMITS SHALL BE PLACED 1-FOOT ABOVE FINISHED GRADE AND MARKED WITH

A 4-FOOT TALL GREEN POST. 5. MANDREL AND PRESSURE TESTS ARE REQUIRED FOR ALL SANITARY SEWER LINES. TELEVISION OF THE SANITARY SEWER SYSTEM SHALL BE COMPLETED PRIOR TO PAVING AS PER

THE CITY OF GRIMES SPECIFICATIONS. 6. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE EXISTING DOWNSTREAM SANITARY SEWER MANHOLE PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED FOLLOWING APPROVAL OF CONSTRUCTION BY THE CITY.

THE SANITARY SEWER SYSTEM SHALL BE COMPLETED AS PER THE CITY SPECIFICATIONS AND THE STANDARDS SPECIFICATIONS REFERENCED IN THESE NOTES. 8. ALL SANITARY SEWER MANHOLES SHALL BE FACTORY PRODUCED WITH STEPS. IF THE SANITARY SEWER MANHOLES ARE NOT INSTALLED WITH STEPS, THEN THE MANHOLE SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.

PCC PAVING

1. ALL SUBGRADE UNDER SLAB TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY FOR A MINIMUM OF 12". RECOMMENDED MOISTURE CONTENT RANGE 0% TO +4% OF OPTIMUM.

2. MOISTEN SUBGRADE PRIOR TO PLACING CONCRETE.

CONCRETE SHALL HAVE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI 4. AGGREGATE SHALL BE CLASS 4.

CONCRETE SURFACES SHALL BE BURLAP FINISH. CHECK SURFACE WITH TEMPLATE. NO DEVIATION OVER 1/8" IN 10' IS PERMITTED. ALL CONCRETE SHALL BE SLOPED TO DRAIN. ALL CONCRETE SHALL BE CURED WITH AN ASTM C309 TYPE 2 WATER BASED WHITE PIGMENTED CURING COMPOUND PER IDOT SEC. 4105

SAW CUT JOINTS AS SOON AS CONCRETE HAS SET ENOUGH TO PREVENT TEARING OF THE CONCRETE ADJACENT TO THE JOINT AND PRIOR TO ANY CRACKING. 8. SAW CUTS TO BE 1/8" TO 1/4" WIDE; DEPTH: LONGITUDINAL T/3, TRANSVERSE T/4.

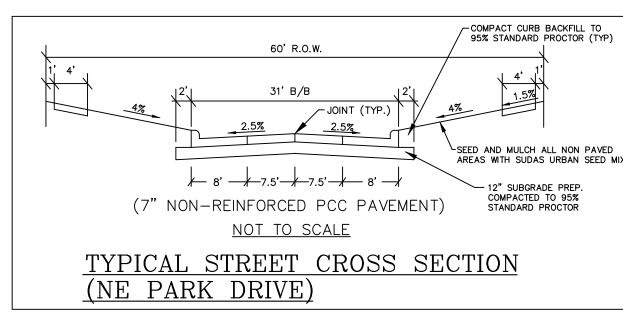
9. LONGITUDINAL JOINT SPACING SHALL NOT BE GREATER THAN 12'. JOINT LAYOUT SHALL BE APPROVED BY THE ENGINEER. 10. BARS AT LONGITUDINAL JOINTS TO BE #5 X 30" DEFORMED AT 30" O.C. AND SHALL BE EPOXY COATED.

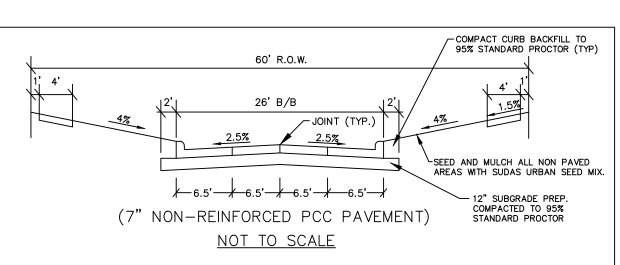
11. ALL JOINTS SHALL BE FILLED WITH W-R MEADOWS D-164 HOT POUR RUBBER BASE JOINT SEALER OR APPROVED EQUAL. 12. PAVEMENT THICKNESS SHALL BE 7-INCH NON-REINFORCED, 26' OR 31' B-B WITH 12" OF SUBGRADE PREPARATION.

13. SUBMIT DESIGN MIX AS DESIGNED BY INDEPENDENT TESTING LABORATORY PRIOR TO PLACING ANY CONCRETE.

14. ALL WORK TO COMPLY WITH CURRENT ACI STANDARDS.

NW 82ND AVE PROJECT LOCATION VICINITY MAP





TYPICAL STREET CROSS SECTION (NE BRIDGE CREEK CROSSING)

1. THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

BENCHMARK:

1. G5B-004 - BURY BOLT ON FH AT THE SW CORNER OF NE PARK DR. AND NE BRIDGE PARK PL. BETWEEN LOT ADDRESSES 2500 AND 2408.

2. G5B-005 - BURY BOLT ON FH. ON THE NORTH SIDE OF BRIDGE PARK PL. BETWEEN LOT ADDRESSES 605 AND 701. AT END OF ROAD.

ZONING:

SITE DATA

FRONT = 35'REAR = 35'

SIDES = 1.1/2 STORIES 7' EACH SIDE 2 AND 3 STORIES 10' EACH SIDE NOTE: SEE STORM WATER POLLUTION PREVENTION PLAN FOR EROSION CONTROL MEASURES

PLANS APPROVED BY CITY OF GRIMES

DATE:



HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT, SPECIFICATION OR REPORT WAS PREPARED BY ME, OR UNDER MY DIRECT PERSONAL SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

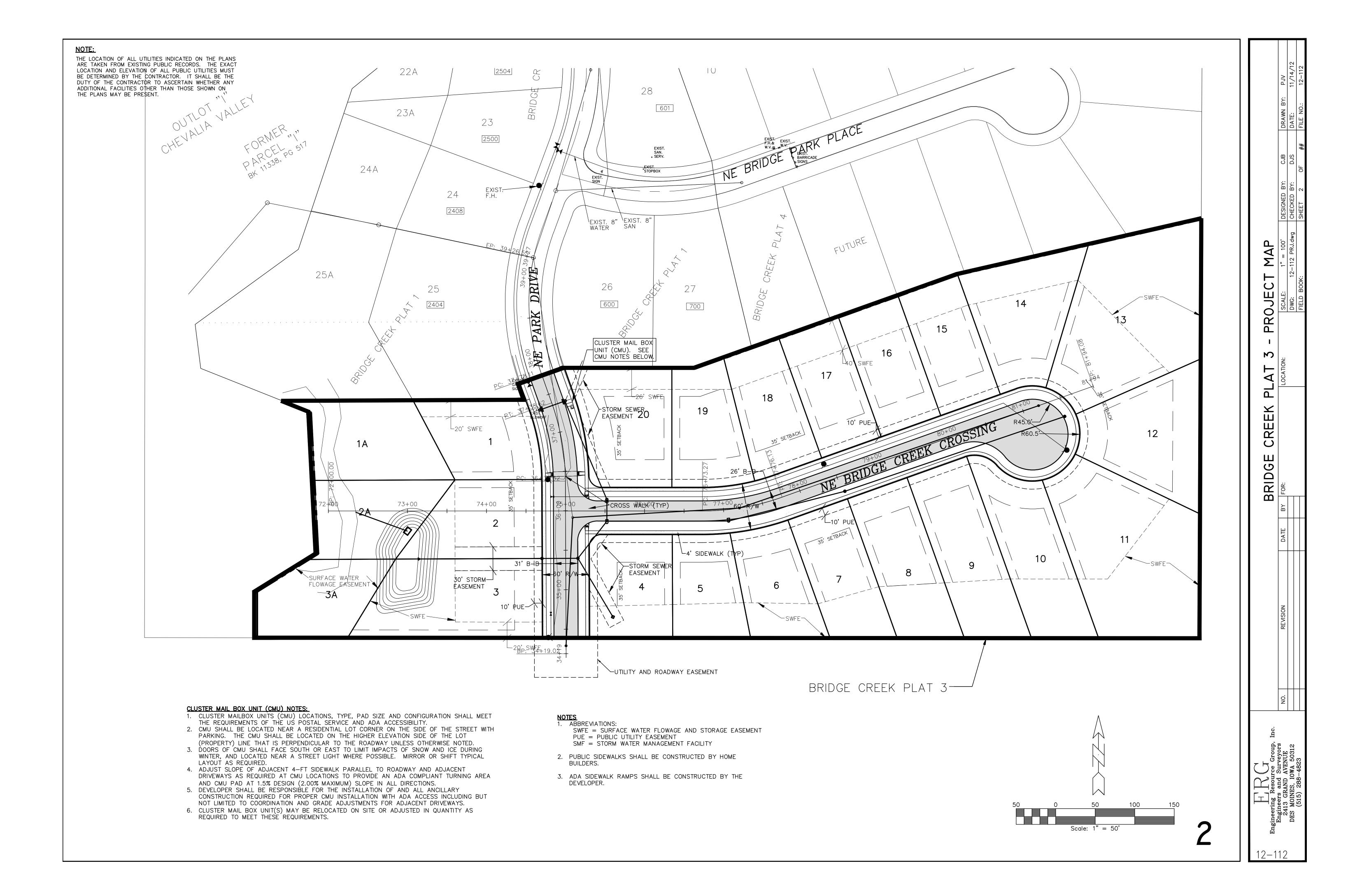
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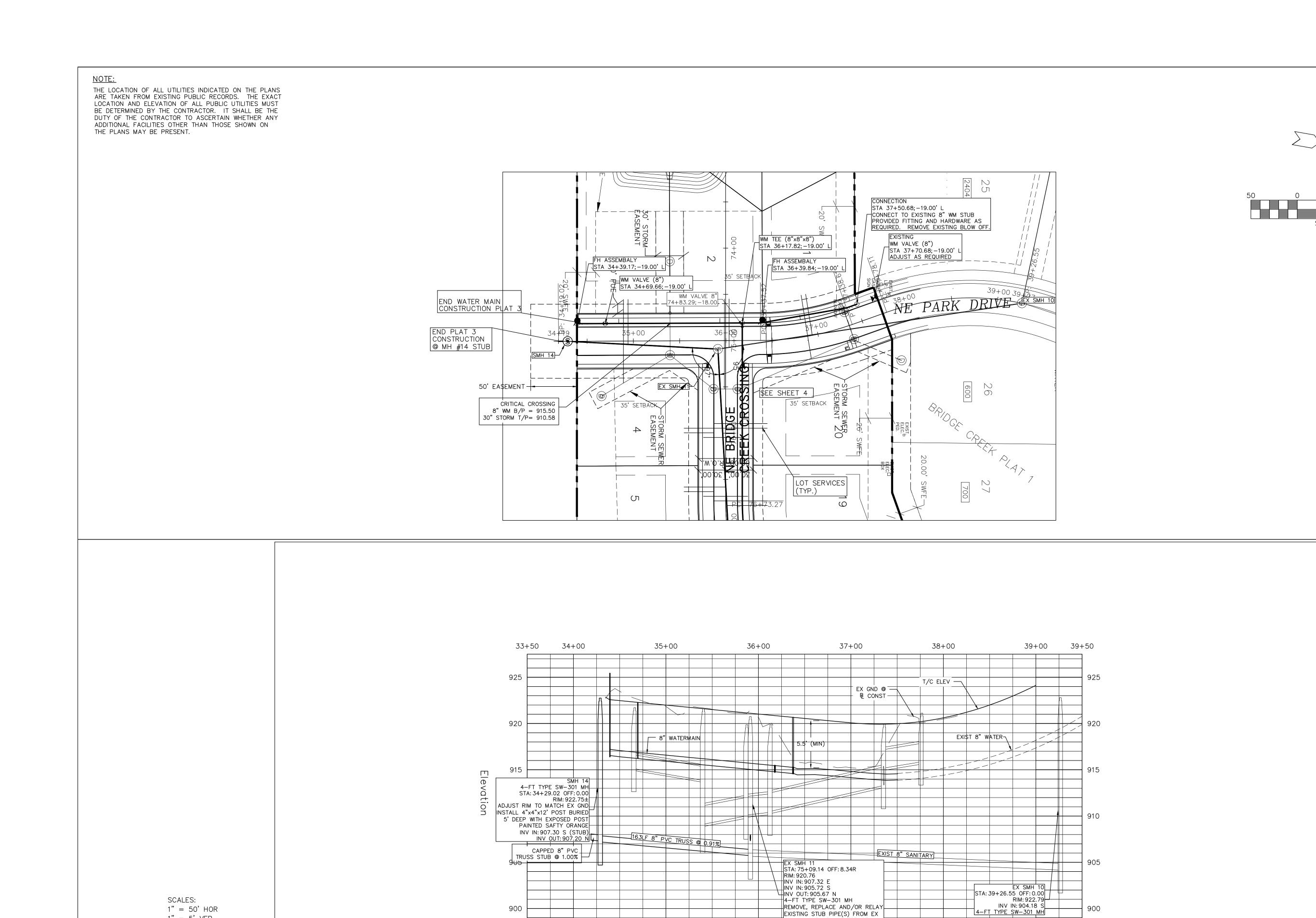
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REMOVE, REPLACE AND/OR RELAY EXISTING STUB PIPE(S) FROM EX SMH#11 AND ADJUST TOP OF MANHOLE AS REQUIRED.

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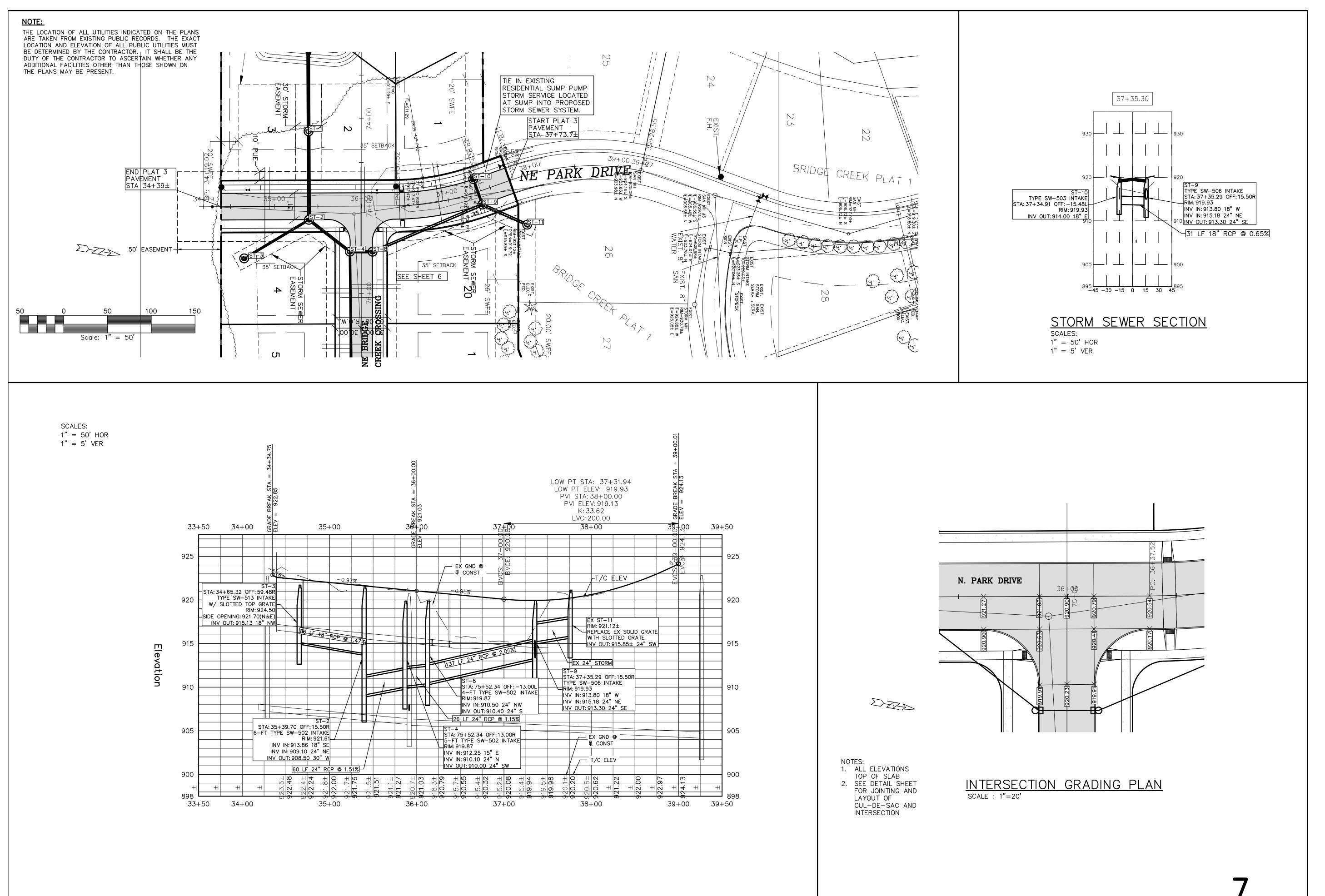
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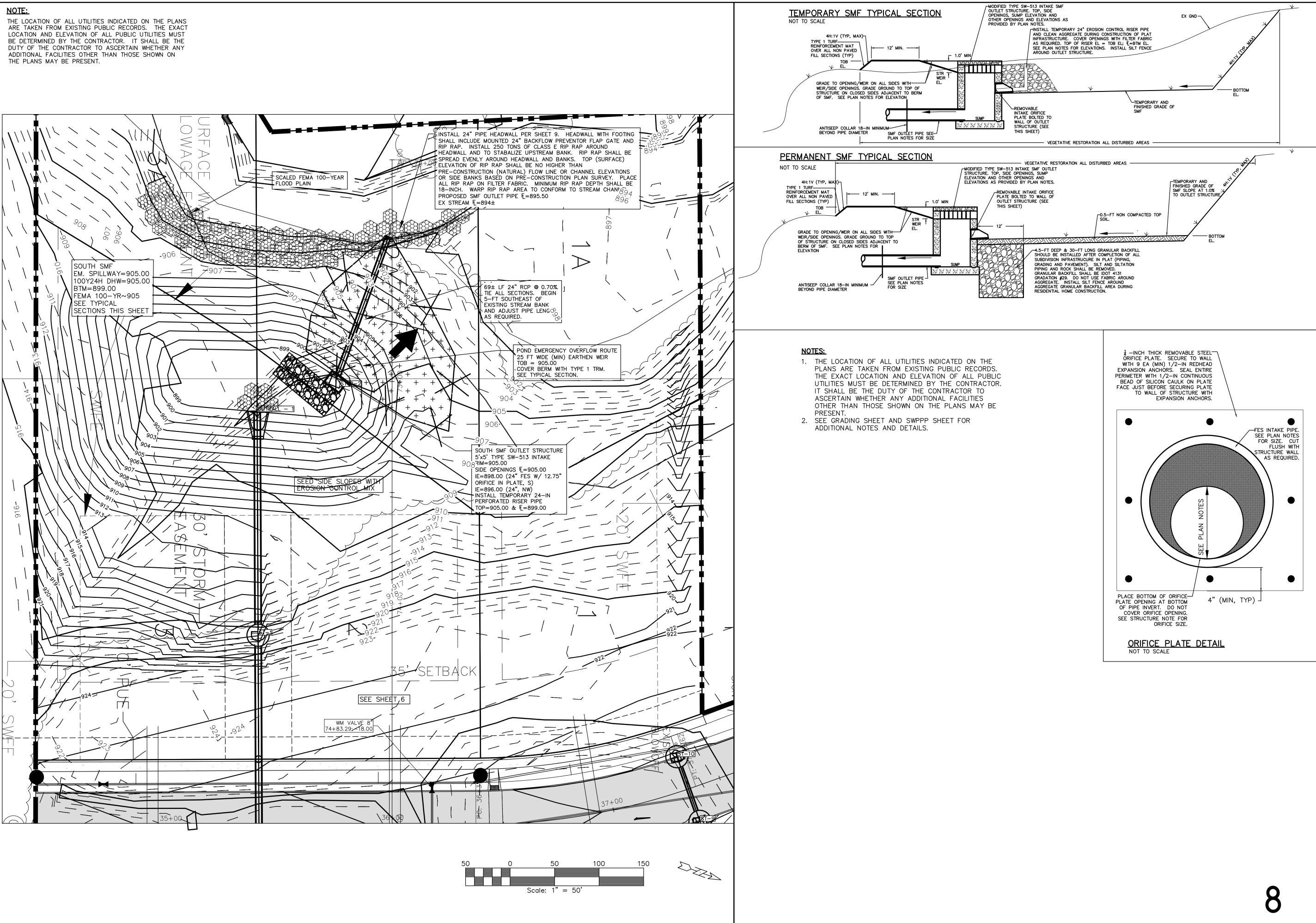
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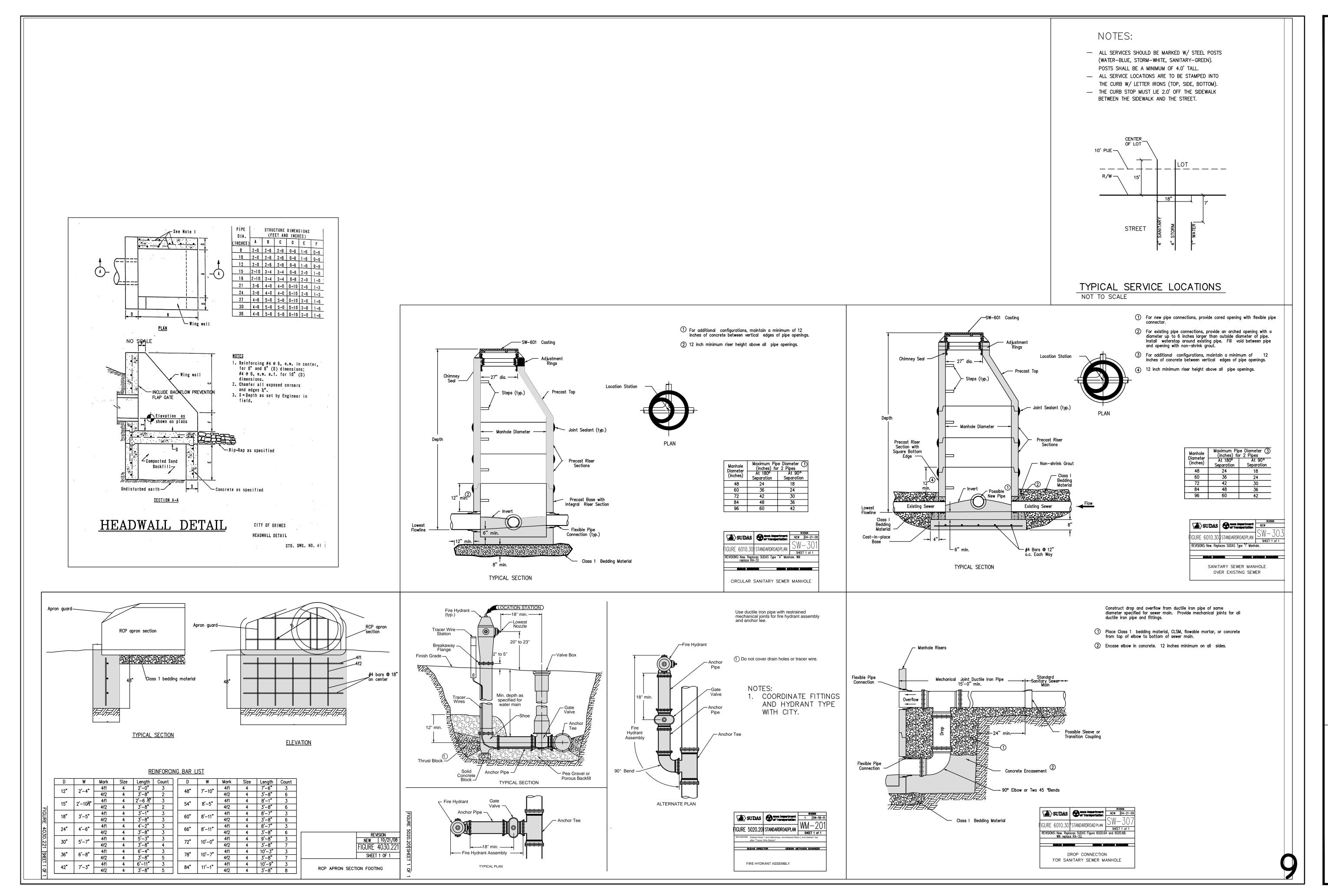


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(515) 288-4823

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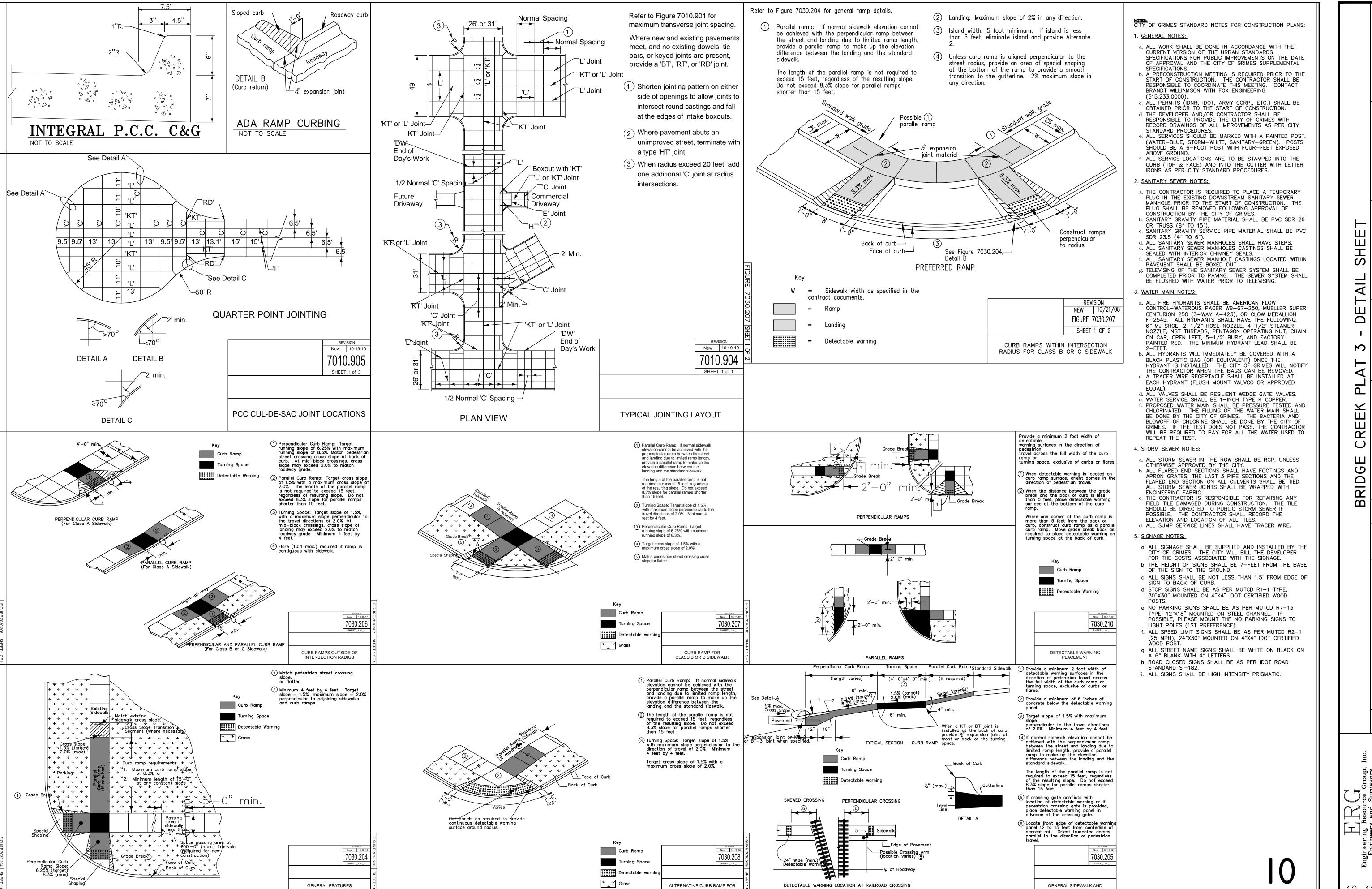
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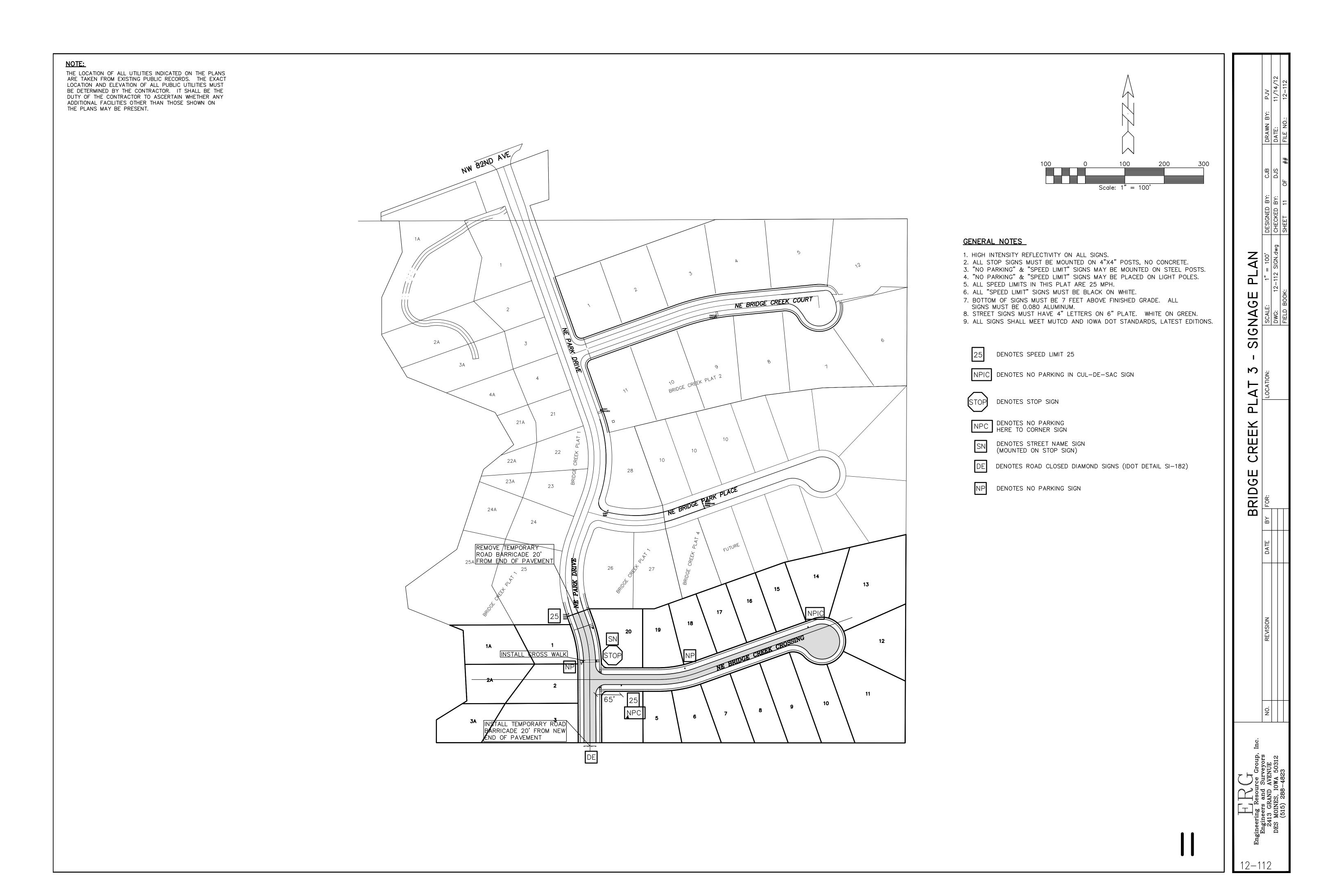
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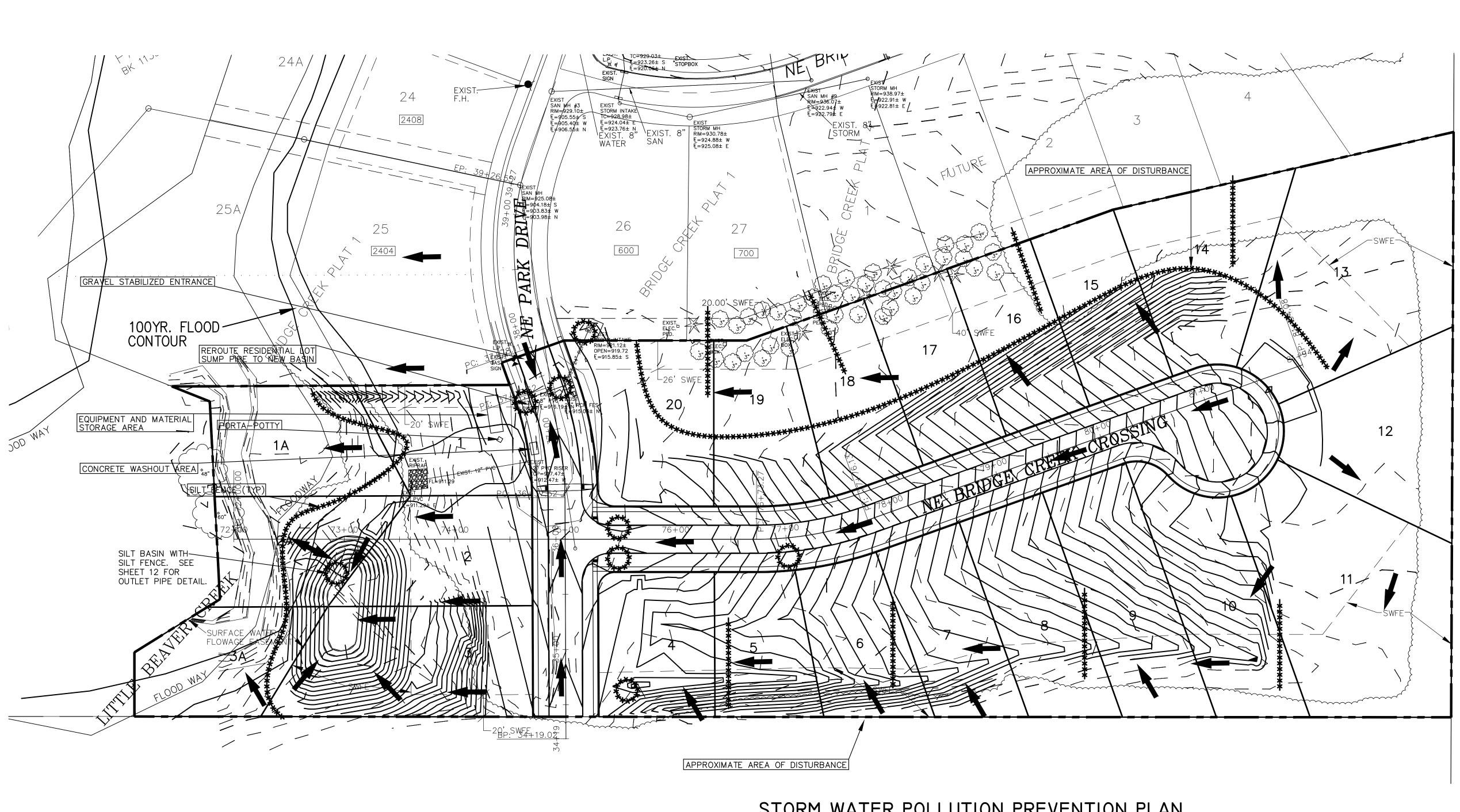
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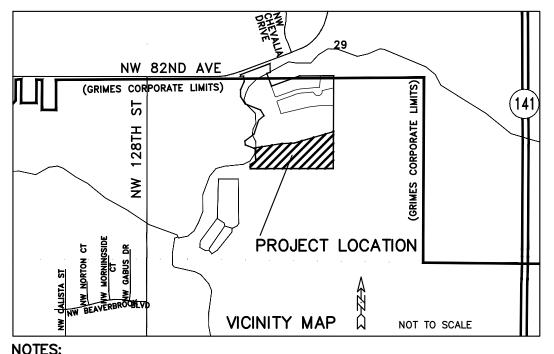
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NOTES:

1. SEE COVER OF SUBDIVISION INFRASTRUCTURE IMPROVEMENT PLANS FOR

2. CONTRACTOR TO CONSTRUCT AND STABILIZE PROPOSED SEDIMENTATION BASIN, BASIN OUTLET STRUCTURE, AND OUTLET TO CREEK PRIOR TO CONSTRUCTING THE REST OF THE SITE. PROPOSED SEDIMENTATION BASIN SHALL BE LOCATED WITHIN THE PROPOSED STORM WATER MANAGEMENT FACILITY (SMF). SEE ADDITIONAL NOTES AND DETAILS FOR ADDITIONAL

. INSTALL TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE SURROUNDED BY SILT FENCE PRIOR TO THE CONSTRUCTION OF SUBDIVISION

4. AT COMPLETION OF SUBDIVISION INFRASTRUCTURE, CLEAN UP BASIN, INSTALL PERMANENT STABILIZATION, AND INSTALL GRANULAR BACKFILL TRENCH IN BOTTOM OF SMF BASIN. SURROUND GRANULAR TRENCH AND OUTLET STRUCTURE WITH SILT FENCE DURING RESIDENTIAL HOME CONSTRUCTION. SMF CONTROL MEASURES IN BASIN SHALL REMAIN IN PLACE UNTIL FULL BUILDOUT OF RESIDENTIAL LOT BUILDINGS IN

5. PLACE SILT FENCE OR FILTER SOCK AROUND INTAKES AND SMF CONTROL

STRUCTURES AFTER CONSTRUCTED. 6. PLACE SILT FENCE OR FILTER SOCK AROUND INTAKES AFTER

CONSTRUCTED.

7. ALL RIP RAP SHALL BE PLACED OVER ENGINEERING FABRIC. AS HATCHED ON CONSTRUCTION PLANS, RIVER BANKS AND AREAS END SECTIONS DISCHARGING INTO CREEK SHALL BE COVERED WITH RIP RAP. DISTURBED AREAS OF CREEK BOTTOM SHALL BE ROCKED.

8. THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

9. ALL AREAS NOT COVERED BY PAVEMENT OR BUILDINGS SHALL BE GRASS. THESE AREAS SHALL FIRST BE SEEDED AND MULCHED BY THE DEVELOPER WITH SUDAS TYPE 4 EROSION CONTROL MIX. UNLESS OTHERWISE SPECIFIED, THE PERMANENT COVER SHALL BE BY THE HOME BUILDER WITH A URBAN LAWN MIX.

10. SEEDED AREAS SHALL BE PREPARED AS SPECIFIED IN SUDAS, AND NO LESS THAN 4-INCHES OF TOPSOIL SHALL BE IN PLACE BEFORE

11. ONLY AREAS DESIGNATED ON PLANS AS PRAIRIE GRASS SHALL BE SUDAS NATIVE GRASS AND WILDFLOWER MIX. THE PRAIRIE GRASS SHALL BE INSTALLED BY THE DEVELOPER.

IMPROVEMENTS DURING AND AT THE COMPLETION OF OF ALL PHASES OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO INFRASTRUCTURE AND HOUSING. DRAIN ANY ONSITE AREAS WITH PONDING WATER TO THE SEDIMENTATION BASIN.

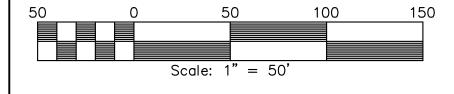
14. EROSION/ SEDIMENTATION CONTROL MEASURE SHALL BE INSTALLED AS SHOWN ON THIS EXHIBIT AND ARE FOR START UP PURPOSES ONLY. CONTRACTOR SHALL MODIFY EROSION / SEDIMENTATION CONTROL MEASURE DURING THE COURSE OF CONSTRUCTION TO ACCOMMODATE FIELD CONDITIONS AND METHODS OF CONSTRUCTION. MODIFY EXHIBIT AS REQUIRED DURING THE COURSE OF CONSTRUCTION TO REFLECT FIELD MODIFICATIONS. CONTRACTOR TO UTILIZE PROJECT SWPPP AND NPDES NOI PERMIT CONDITIONS FOR ADDITIONAL DETAILS AND DIRECTIONS. EROSION / SEDIMENTATION CONTROL MEASURE MAY BE REMOVED AS ALLOWED BY PERMIT CONDITIONS AND AT THE TERMINATION OF THE NPDES STORM WATER PERMIT AT THE COMPLETION OF THE PROJECT.

STORM WATER POLLUTION PREVENTION PLAN

DENOTES EXIST. CONTOUR DENOTES PROPOSED CONTOUR DENOTES PROPOSED SPOT ELEVATION DENOTES TOP OF WALL ELEVATION DENOTES BOTTOM OF WALL ELEVATION

ALL CONTRACTORS AND SUB-CONTRACTORS MUST SIGN THE NPDES CERTIFICATION STATEMENT PRIOR TO PERFORMING ANY WORK ON SITE. BY SIGNING THE CERTIFICATION STATEMENT, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BECOME A CO-PERMITTEE WITH THE OWNER AND OTHER CO-PERMITTEES. AS A CO-PERMITTEE, YOU AND YOUR COMPANY ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF IOWA TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THE NPDES PERMIT. SIGNIFICANT PENALTIES MAY BE

IMPOSED BY THE EPA AND/OR THE IDNR SHOULD A PERMITTEE OR CO-PERMITTEE VIOLATE NPDES PERMIT REQUIREMENTS.



OF 2

DISTANCE FROM SITE TO RECEIVING WATERS

LITTLE BEAVER CREEK: 70 FEET

X 56.85 T/W B/W

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

NOTES:

- 1. PROTECT VEGETATIVE BUFFER (EX TREES AND MATURE VEGETATION) WHERE NO GRADING IS PROPOSED. (TYP) 2. THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. 3. SCOUR STOP SHALL BE INSTALLED BY A CERTIFIED INSTALLER.
- 4. ALL RIP-RAP SHALL BE PLACED OVER ENGINEERING FABRIC.
- 5. ALL DISTURBED AREAS OF EXISTING STREAMS SHALL BE COVERED WITH RIP-RAP.
- 6. ALL AREAS NOT COVERED BY PAVEMENT OR BUILDINGS SHALL BE TURF GRASS. TURF GRASS SHALL BE USED FOR THE PERMANENT VEGETATIVE RESTORATION OF ALL ROADWAY RIGHT-OF-WAYS AND ALL RESIDENTIAL LOTS. THESE AREAS SHALL FIRST BE SEEDED AND MULCHED BY THE DEVELOPER WITH SUDAS TYPE 4 EROSION CONTROL MIX. UNLESS OTHERWISE SPECIFIED, THE PERMANENT COVER SHALL BE BY THE HOME BUILDER WITH A URBAN LAWN MIX.
- 7. SEEDED AREAS SHALL BE PREPARED AS SPECIFIED IN SUDAS, AND NO LESS THAN 4-INCHES OF TOPSOIL SHALL BE IN PLACE BEFORE PERMANENT (FINAL) SEEDING OPERATIONS COMMENCE.
- 8. AREAS DESIGNATED ÀS LAWN SEED MIX SHALL BE SEEDED AND MULCHED BY THE DEVELOPER WITH SUDAS TYPE 4 EROSION CONTROL MIX. THE PERMANENT COVER SHALL BE BY THE HOME BUILDER WITH A URBAN LAWN MIX.
- 12. NATIVE (FLOWERING PRAIRIE) GRASSES SHALL BE USED FOR THE PERMANENT VEGETATIVE RESTORATION OF ALL REAR YARD COMMON AREAS AS DESIGNATED ON THE PLANS. AREAS DESIGNATED AS PRAIRIE GRASS SHALL BE SUDAS NATIVE GRASS AND WILDFLOWER MIX. THE PRAIRIE GRASS SHALL BE INSTALLED BY THE DEVELOPER.
- 13. PRAIRIE GRASS MANAGEMENT MOW OR SHRED IN LATE FALL TO ELIMINATE DEAD MATERIAL IF NEEDED. SPRING BURNING (NOT UNTIL AFTER 2ND YEAR) MARCH-APRIL TO CONTROL WEEDS, SMALL TREES AND COOL SEASON GRASSES. COORDINATE BURNING WITH THE CITY. MAINTENANCE OF THE POND AND PRAIRIE GRASS AREAS SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION.

